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YOU MAKE THE CALL: ANSWERS

January—The patient in our January issue has a large, pigmented hairy verruca on his left upper lid.

He experienced many signs typical of this viral wart. Among them:

- moderate conjunctivitis;
- chronic epithelial keratitis; and
- inflammation of the anterior chamber.

In this case, keratitis developed when hairs on the verruca's posterior repeatedly rubbed against and abraded the epithelium. The cornea became stippled.

When a verruca insults the cornea, it's time for an ocular plastic surgeon to excise the growth before corneal ulcers, scarring, and permanent vision loss occur. An antibiotic ointment such as Garamycin will guard against secondary infection after surgery. Usually, corneal stippling will resolve in a few days.

February—The 82-year-old patient in our February issue has a dellen on her left cornea.

Its cause? Corneal dehydration. This patient's flaccid eyelids prevented normal movement of the tears over the globe and down the lacrimal drainage system. Poor ocular lubrication due to her age complicated the problem.

Over time, the corneal epithelium thinned and dried out. Fluorescein pooled in the dry, dimpled spot.

With restored moisture, dellen will resolve in two to four weeks. This patient needed an extended-wear bandage contact lens with high water content to preserve corneal moisture. Artificial tears provided extra lubrication.

To guard against secondary infection, she also used Tobrex every three hours.

Three days after her exam, the dellen began to resolve. Three weeks later, the cornea was normal.

March—The patient in our March issue has posterior subcapsular cataracts.

While this diagnosis may be obvious, the etiology isn't. Subcapsular cataracts often stem from long-term steroid use. Yet this healthy, young patient wasn't taking any medications.

Additional testing provided an answer: A serum cortisol blood test revealed an elevated steroid level. Since the patient wasn't taking oral steroids, his system was producing them.

Further evaluation by an internist revealed an adrenal gland tumor. He promptly referred the patient for surgery to excise the tumor. Then, an ophthalmologist removed the cataracts and implanted intraocular lenses.

Today, with reading glasses, the patient sees 20/20 at both near and distance.

April—The patient in our April issue has two related problems.

The tiny, dark spot on the optic nerve head is a crater-like depression called an optic pit. The visual field exam confirms this diagnosis; optic pits often cause arcuate defects—or other types of defects, depending on which optic nerve fibers are affected.

The patient's optic pit, combined with blurry vision, central scotoma, and absence of the macular reflex, leads to the diagnosis of a second problem: central serous retinopathy, or fluid under the macula. Optic pit and central serous retinopathy frequently occur in tandem.

In this case, a fluorescein angiogram confirmed the central serous retinopathy.

There is no treatment for optic pit, and central serous retinopathy must resolve on its own. For this reason, the doctor simply monitored the patient monthly and instructed her to periodically check her vision with an Amsler grid.

Fourteen weeks later, the central scotoma resolved, and vision returned to almost 20/25.

May—The patient in our May issue has a retinal epithelial nevus on his right retina. This lesion may be congenital or may arise from systemic changes such as varied hormone levels.

The key to distinguishing the nevus from other retinal growths is its location and appearance.

Because the doctor could still see the lesion through a red-free filter, its location is deep within the retina. This, plus its smooth texture and uniform color, point to a diagnosis of nevus.

Additional tests backed up the diagnosis. B-scan ultrasound confirmed the lesion's location and depth. Fluorescein angiography revealed that the lesion was not vascular, and therefore probably not malignant.

To manage this patient, the doctor performed a retinal exam and fundus photography, then monitored him regularly for changes that could signal malignancy.

In that case, the doctor would refer the patient to a retinal specialist for biopsy and possible surgery.

June—The patient in our June issue has chronic staph blepharitis.

This condition occurs when *Staphylococcus aureus* infects the cilia. The hair follicles cannot nourish the hair, and many lashes fall out. In long-standing cases, the patient's lids swell from excessive tearing and rubbing. This rubbing, combined with bacteria on the lid, may cause corneal stippling.

To resolve the condition, the doctor told this patient to apply Bacitracin ophthalmic ointment and to scrub the outside of his lids with baby shampoo twice daily. Seven days later, the patient's condition improved.

After three weeks, the doctor discontinued antibiotic treatment. But to prevent recurring blepharitis, the doctor recommended that the patient continue scrubbing his lids each time he washed his hair.

July—The 42-year-old patient in our July issue has pseudotumor cerebri, a condition in which elevated intracranial pressure can damage the optic nerve and reduce vision.

The doctor immediately suspected pseudotumor because of the patient's age and obesity. To be certain, he decided to rule out the next most plausible causes of elevated intracranial pressure: hypertension and brain tumor.

Since the patient's hypertension was under control, the doctor ordered some neurological tests. A CT-scan and neurological exam were normal. However, a spinal tap of the lumbar region

revealed that her spinal fluid was elevated and contained an abnormally high number of white blood cells.

The neurologist started the patient on Acetazolamide to reduce the fluid pressure. With the optometrist, he followed the patient closely over the next two months until the edema began to subside. Within six months, the optic nerve heads were normal.

August—The patient in our August issue has pigmentary glaucoma. It arose from pigment dispersion syndrome, a condition in which iris pigment blocks the trabecular meshwork.

The patient's high intraocular pressure and central scotomas immediately pointed to glaucoma. But the doctor's first clue to pigment dispersion syndrome came when he retro-illuminated the eye and noticed iris atrophy and Krukenberg's spindle on both corneas. Gonioscopy revealed heavy pigment deposits in both drainage angles.

The doctor initiated glaucoma treatment with Betagan every 12 hours. After four weeks, the patient's intraocular pressures fell to 14mm Hg.

Pigmentary glaucoma does not respond well to medication, and therefore requires frequent monitoring. Most patients eventually need filtering surgery such as trabeculectomy to control their pressures.

The doctor closely monitors this patient every three months.

September—The patient in our September issue has Von Recklinghausen's disease, an inherited condition in which brown nodules of various sizes appear on the body's ectodermal tissue and central nervous system.

The disease, also called neurofibromatosis, is untreatable and often harmless. However, if it manifests strongly in the optic nerve, the patient may experience proptosis and vision loss. If lesions form near the angle, they may cause secondary glaucoma.

This patient's ocular involvement was minimal. The lesions on his irises were scant and proved harmless. However, the doctor will monitor him annually in case the growths should spread to another, more susceptible part of the eye.

October—The patient in our October issue has a long-term case of narrow angle glaucoma. Her intraocular pressures are normal because the glaucoma has, in fact, "burned itself out."

In prolonged cases of glaucoma, production of aqueous in the ciliary body slows down. Intraocular pressure reverts to normal. Unfortunately, by then most patients have lost much of their visual fields.

This patient had trouble concentrating during her visit, so the doctor could not test her visual field. However, he did find significant iris atrophy and a hole in the right iris where aqueous fluid had broken through during an acute attack.

The presence of synechiae was another sign that intraocular pressures had been high in both eyes for a prolonged period.

To guard against similar atrophy in the left iris, the doctor referred the patient for an iridectomy. The incision, at the 12 o'clock position on the iris, allowed aqueous to flow freely and reduced the threat of further vision loss.

November—The patient in our November issue has "stage II" syphilis. This infection can affect all systems in the body. In the eyes, it can damage any structure, from the optic nerves to the corneas.

The optometrist's first clues to this diagnosis were ghost vessels in the cornea and hair loss that seemed too severe given the patient's age.

The doctor immediately ordered a battery of blood tests. One test, specifically for syphilis, showed levels of spirochete bacteria 11 times higher than normal.

This test, plus consultations with a dermatologist and neurologist, confirmed the diagnosis. The doctors classified the case as "stage II" because the infection had progressed beyond skin lesions to corneal neovascularization and optic nerve edema.

An internist treated the patient with massive weekly shots of penicillin K. Repeated serology tests during treatment showed that the bacteria returned to normal levels. Within six weeks, the patient's optic nerve head seemed flat, and corrected vision in the right eye reached 20/20.

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